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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/079,468	05/15/1998	AKIRA NISHIMURA	360842003400	8388

25227 7590 08/07/2002

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EXAMINER

PRATT, CHRISTOPHER C

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 08/07/2002

34

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/079,468	NISHIMURA ET AL.	
	Examiner	Art Unit	
	Christopher C. Pratt	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 37-44 is/are pending in the application.
- 4a) Of the above claim(s) 1-21, 29-35, 37 and 38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-28 and 40-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendments and accompanying remarks filed 7/2/02 have been entered and carefully considered. Applicant's amendment is not found to patentably distinguish the claims over the prior art and Applicant's arguments are not found persuasive of patentability for reasons set forth herein below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 43 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 43 is indefinite because it confuses the spatial relationship of the invention. If a binder is distributed in a line-like manner, then how can it extend "through" the fabric? The phrase "through the fabric" seems to contradict the limitation of applying the binder in a linear manner.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1771

5. Claims 22-28 and 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kishi et al (5447785) in view of Homma et al (5100713), as previously set forth.

Applicant argues that the sizing agent taught by Kishi is not within the scope of the word "binder" used in applicant's claims. The instant rejection rests on two alternative positions. The first is that Kishi's sizing agent is equivalent to applicant's claimed binder. The second, alternative, position is that Kishi's reference to a sizing agent is irrelevant because Kishi suggests subjecting the prepreg to a flattening operation and Homma teaches a flattening operation involving a binder. Therefore, it would have been obvious to the skilled artisan to utilize Homma's flattening operation and line-like binder. Homma specifically teaches that bonding by lines is desirable to improve the impregnation ability of the matrix resin (col. 6, lines 50-54).

Applicant only traverses the first position and argues that the terms "sizing agent" and "binder" are not equivalent. Applicant argues that Fairchild's Dictionary provides evidence of the different meanings of the two words. Faichild's Dictionary of Textiles defines sizing as a "generic term for compounds applied to yarns or fabrics to improve their . . . stiffness, strength. Currently, polymeric resins may be used to provide a more durable effect (definition has previously been made of record)." It is the examiner's position that a binder is equivalent to a sizing agent because a binder is a polymeric resin applied to yarns or fabrics to improve their stiffness and strength.

Applicant has not traversed the alternative position that it would have been obvious to add the binder of Homma to Kishi's prepreg.

Art Unit: 1771

Applicant argues that Kishi does not read on both a sizing agent and a binder. This argument is not commensurate in scope with claims 22-28 and 42-44 because said sizing agent is merely optional.

With respect to newly added claim 41, it is the examiner's position that the combination of Kishi and Homma render obvious the use of both a sizing agent and a binder. As previously discussed, Kishi teaches the use of a sizing agent. Homma teaches applying a binder in a line-like manner to yarns of a prepreg. It would have been obvious to the skilled artisan to further add a binder to Kishi's sized yarns. Such a combination would have been motivated by the desire to reduce the twisting of Kishi's yarns.

With respect to claim 42, Homma teaches the use of binders having a low melting point (col. 5, lines 40-45). If said binders do not inherently have a melting point within applicant's claimed range then it would have been obvious to the skilled artisan to select a polymer that melted within said range. Such a modification would have been motivated by the desire to utilize a polymer that requires less heat and energy to facilitate processing.

With respect to claims 43-44, Homma's teaching of bonding by lines implies that the binder must sit on top of the fabric on the individual yarns. Based on this teaching it would have been obvious to the skilled artisan to apply the binder linearly over individual yarns thus when yarns crossed over and under each other in the weave pattern the binder would be both through the fabric and on the fabric.

Art Unit: 1771


Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Pratt whose telephone number is 703-305-6559. The examiner can normally be reached on Monday - Friday from 7 am to 4 pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Christopher C. Pratt
August 5, 2002



CHERYL A. JUSKA
PRIMARY EXAMINER